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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/825,205

04/16/2004

Sung-Su Jung

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08/07/2009

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EXAMINER

FISCHER, JUSTIN R

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

08/07/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 10/825,205 | Applicant(s) JUNG ET AL. | |
| | Examiner Justin R. Fischer | Art Unit 1791 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 1-17 and 20-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18 and 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art in view of Yamada et al. (JP 2002-258299, provided in IDS).

The Admitted Prior Art discloses a method of fabricating a liquid crystal display panel by forming a thin film transistor array substrate, forming a color filter substrate, dispensing a material through a plurality of syringes (301A, 301B, 301C) and their respective nozzles (302A, 302B, 302C) onto at least one of the substrates, and joining the substrates (Figure 3; sections [0012, 0016-0017]). It is further noted that the assembly of the APA includes a single support 314 as required by the claimed invention. The film transistor array substrate has a plurality of liquid crystal display panels and the color filter has a plurality of liquid crystal display panels ([0009] [0010], [0012] and Figure 1). It is unclear as to whether the Admitted Prior Art teaches a syringe having a plurality of nozzles where at least one of the nozzles can move with respect to a position of the body of the syringe where the material can be dispensed from the nozzles at the same time.

Yamada teaches it being known in the art of liquid crystal display manufacture to use a dispensing apparatus comprising a syringe having a body (8) for containing a dispensing material and a plurality of nozzles (10) at one end of the body to supply the material onto a substrate (Figure 1; section [0022] at top of p. 13). At least one of the nozzles can be moved with respect to the body to adjust the size of a dispensed pattern and the material can be dispensed from the plurality of nozzles simultaneously (Figure 5; portion of section [0010] at top of p. 10; section [0036]). This makes it possible to drop the liquid crystal in a specified pattern and quantity.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use a dispensing apparatus where the syringe N has a plurality of nozzles M connected to it's body portion such that at least one of the nozzles moves with respect to the body and the plurality of nozzles dispense the material simultaneously when manufacturing the LCD panel of the Admitted Prior Art because such is known in the art, as evidenced by Yamada, where this allows one to drop the liquid crystal in a specified pattern and quantity. In such an instance, multiple nozzles would be associated with each syringe and thus satisfy the claimed quantitative relationship $N \times M$ (e.g. assembly with 6 liquid crystal panel has 3 syringes N with 2 nozzles M each).

One would appreciate using the dispenser of Yamada to drop liquid crystal into the plurality of liquid crystal display panels of the admitted prior art because they are arranged in a pattern and Yamada discloses a dispenser capable of simultaneously dropping the liquid crystal in a pattern.

Lastly, with respect to the independent claim, Yamada teaches connection portion (11) (Figure 1; section [0022] at top of p. 13).

As to claim 19, the Admitted Prior Art in view of Yamada teaches such.

Response to Arguments

3. Applicant's arguments filed April 13, 2009 have been fully considered but they are not persuasive.

As detailed above, the pending rejection involves the modification of the assembly disclosed by the APA. Figure 3 of the original disclosure clearly depicts the APA assembly as including a single support 314 and a plurality of syringes, wherein each syringe includes a second nozzle. In view of Yamada, one of ordinary skill in the art at the time of the invention would have found it obvious to modify the APA assembly, which includes a single support body 314, to include multiple nozzles for each syringe (more efficient dispensing).

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

Art Unit: 1791

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R. Fischer** whose telephone number is **(571) 272-1215**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Justin Fischer
/Justin R Fischer/

Application/Control Number: 10/825,205

Page 6

Art Unit: 1791

Primary Examiner, Art Unit 1791

August 4, 2009